The Political Problem of Industrial Civilization. By Elton Mayo. Cambridge: Harvard University Printing Office, 1947. Pp. 26. $.50.

This slender pamphlet consists of two lectures given by Dr. Mayo at a conference on Human Relations and Administration at Harvard last May. In bidding farewell to his colleagues with whom he has carried on painstaking and distinguished researches over the past twenty-one years, Dr. Mayo makes only a tantalizing beginning at extending to the political sphere his analysis of the industrial scene summarized in his recent volume, *The Social Problems of An Industrial Civilization.*

For Dr. Mayo the principles of sound organization have always been those which tapped the wellsprings of human cooperation. He looks at Russia in the first lecture and soberly credits her great achievements in modernizing a primitive community in a quarter of a century and in securing cooperation from so vast and heterogeneous a population. But he warns that the "heroic" methods of administration which so far have been used must sooner or later raise a serious internal problem because they are incompatible with the spread of literacy and education which has perhaps been Russia's most striking achievement. It is refreshing at the present moment to have the Russian problem discussed in terms other than those of American security. In the second lecture he points up the plight of the modern world deprived of the unifying vision Christianity once gave it which transformed it for a while from "another culture to a civilization."

Few will gainsay Mayo's insistence that the outstanding need of the world today is "for investigation and study of organization and the sound principles of intelligent administration." As we congratulate a scholar on a life-time of research well spent, we may hope that his retirement is only nominal and that we may look forward to having, in a more elaborate form, his mature judgment on contemporary political problems and in the role that law might play in "the development of the almost endless possibilities of human social capacity."

HARRY KALVEN, JR.*

Economics of Public Utilities. By Emery Troxel. New York: Rinehart & Co., Inc. 1947. Pp. ix, 891. $5.75.

Designed primarily as a text for college courses in public utilities economics, this is actually a study of forty years of social control of a part of American industry. Local, state, and federal experiences with the regulation of privately owned water, gas, electric, telephone, and urban transportation systems are described and analyzed in terms of both economic and social consequences, but discussion of regulation of rail, motor, and air carriers is omitted, apparently in recognition of the special problems there presented.

Many accounting, financial, and corporate-integration regulation problems which public utilities commissions face are isolated and discussed. The consideration of earnings control covers not only the history of judicial and administrative fumbling with the concept of "fair return on fair value" and a description of the rate-fixing methods currently used by various commissions but also includes a discussion of "continuous," "cyclical," and "marginal-cost" methods. There is an explanation of differential pric-

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ing, a problem which is seldom squarely faced by commissions and too frequently ignored in discussions of regulation. Radio broadcasting, its present regulation, and the serious social problems presented are discussed. Finally, there is an examination of public ownership including rural electrification and federal power production, a discussion of the special rate problems arising, and an economic analysis of the place of public management in a system of "free enterprise."

Detailed discussion of all the problems covered and the solutions examined and advocated or discarded is obviously impossible here, but the general approach can be appreciated from a consideration of the treatment of some of the major topics.

Rightly critical of the courts for their failure to furnish meaningful criteria for public utility status, Troxel recognizes that the legal concept is not based solely on economic considerations but is rather a product of the political and social theories of legislators and judges as to the extent to which public price regulation is desirable. There is considerable evidence to support this conclusion. Comparison of the economic characteristics of "utility" and "non-utility" businesses readily demonstrates that there is no clear-cut demarcation on the basis of the effectiveness of competition as a means of price control. The traditional list of public utilities neither exhausts the areas of imperfect competition, nor does it include only "natural monopolies." Certainly decreasing costs on an increasing volume of output with the accompanying "economies of size" are not limited to the industries commonly designated as public utilities. Similarly, large capital requirements and concentrations of managerial control are a commonplace of many non-utility industries, as the history of the production of steel, sulphur, aluminum, and automobiles aptly demonstrates.

Significantly, however, the public utilities deal directly with the ultimate consumers of their services. The demand for these services, moreover, is commonly both urgent and immediate, and this condition cannot readily be alleviated because the services usually cannot be stored. At the beginning of this century production of these services in most communities was controlled by monopolies, and that fact was well known to the public. This combination of factors engendered political pressures which resulted in specific legislative designations of those industrial areas in which acquisitiveness was to be limited by public regulation. When the "due process" clause was invoked as a barrier to such regulation, the Supreme Court of the United States became the final arbiter of the extent to which the basic individualism characteristic of our system might be modified and its opinions disclose the political and social considerations which dictated its conclusions.

Thus inevitably suggested, but not answered in this work, is the query whether, if the imperfection of competition in other areas—the Sherman Act notwithstanding—were as immediately known to and felt by the public, extensions of price regulation to other industries would be demanded and judicially approved. Recent experiences and the post-war reactions suggest the contrary, perhaps, but the broad coverage of war-time price controls makes any conclusions as to the desirability of controls over selected industries of doubtful validity.

In any event, thoughtful consideration of past experiences with regulation of economic activity would appear to be highly desirable. The control of milk distribution and the National Industrial Recovery Act demonstrate the willingness of legislators and courts to impose legal limitations on business activity in a depression period. But there is little evidence that such restraints have been justified on any evaluation of past

experiences with attempts at close regulation of economic activity. Rather, it has been assumed that such regulation has served the public interest. Whether that assumption is well-founded, however, should be the subject of an exhaustive and critical inquiry. The concentrations of economic power in the public utility field from which the state legislators attempted to protect the public by rate regulation are presently duplicated in other areas of business activity. Whether similar or varying controls are to be imposed should depend, in part, at least, on the extent to which those already in force have served the public interest.

Believing that the accomplishments of competent commissions make a case for public regulation of privately owned utilities, Troxel is critical only of the incompetent regulatory bodies and "unwise" regulatory policies. Recognizing both the private interest in profits and the public interest in plant maintenance and improvements in, and extensions of, service at the lowest possible rates, he analyzes policies in terms of private property and private management concepts as well as on the basis of the effectiveness of the limitation on the acquisitiveness of firms enjoying a publicly protected monopoly status.

On either basis policies with respect to the control of earnings are of paramount importance. But the standards now applied by the commissions in fixing rates are far from satisfactory. The familiar "fair return on fair value" rule has long since been demonstrated to be impossible of even reasonably precise application no matter how competent the commission, chiefly because of the difficulties inherent in any attempt to value the vast and complex properties of most operating companies. Troxel examines several alternatives and in light of the willingness of the Supreme Court expressed in *Federal Power Comm'n v. Hope Natural Gas Co.*,[1] to substitute results for methods as the subject of judicial review, public regulatory bodies are free to do likewise and they should seize the opportunity.

There is a discussion of "continuous" earnings control which offers an opportunity to rectify mistakes by adjustments in rates for the future to compensate for excessive or inadequate earnings in the past. "Cyclical" control based on general business activity to reduce the "stickiness" of utility prices is likewise considered. But neither of these policies would do more than accentuate a factor to be considered. Neither would furnish any standard or formula for the fixing of rates.

As a substitute for "fair return on fair value" Troxel proposes that rates be fixed as a general rule by equation of marginal costs and demand prices.[2] In no event, however, should rates be lower than the price at which the maximum output of available capacity can be sold. "Marginal cost" is defined as the additional cost of additional output, and for the discussion it is assumed that marginal costs are the same for all classes of service and that present plant capacity is fixed. The "demand price," in turn, is that price at which the maximum output of present capacity can be sold. Put

[1] 320 U.S. 591 (1944).

[2] For proposals to fix utility rates by equation with marginal cost alone, see Hotelling, The General Welfare in Relation to Problems of Taxation and of Railway and Utility Rates, Econometrics (July, 1938); Troxel, Incremental Cost Determination of Utility Prices, Limitations of the Incremental Cost Patterns of Pricing, Incremental Cost Control under Public Ownership, Journal of Land and Public Utility Economics (Nov. 1942, Feb. 1943, and Aug. 1943); Lerner, The Economics of Control (1944). Critical of these is Coase, The Marginal Cost Controversy, Economica 169–82 (Aug. 1946).

another way, to fix rates a commission would construct two curves on the basis of all available data. One would be the curve of marginal costs at various levels of production. The other would reflect demand in terms of price. The intersection of the two curves would then be determinative of the rates.

To illustrate applications of the proposal, if the capacity of an electric plant were 1,000,000 kilowatt hours, marginal cost of production at capacity ½ cent per kilowatt hour, and consumer demand such that maximum output and no more could be sold at ½ cent per kwh, the rate would be fixed at ½ cent per kwh. If, however, the consumers would take the maximum output only at a price of ¼ of a cent per kwh, the rate would be fixed on the basis of the marginal cost of the last unit which could be sold at a price equal to its marginal cost, whatever it might be. Conversely, if the total output could be sold at 1 cent per kwh that would be the rate fixed.

Both social and economic justifications for the proposal are offered. It is argued that utility rates so fixed would approximate the price which would result if the market operated under the conditions of "pure competition" since there a single seller, who by definition would have no control over the market price and would increase his production so long as the revenue from increased production was equal to or greater than the cost of the additional units produced. Decreasing costs obviously dictate this course lest individual competitors achieve a volume of production which will be reflected in a decrease in market price to the detriment of any producer whose volume is not sufficient to permit profitable operation at that price level. In any market, whether prices are fixed by the government as in the case of the public utilities or not, the community is desirous of obtaining the maximum output for which there is a demand at the lowest possible price. Thus, a price fixed by reference to "marginal cost" appears to serve the social good. Still, it is the relationship between total costs and the sum of prices received for total output which determines the profitability of the operations of a particular firm. Similarly, public utility rates fixed by reference to marginal costs alone, would not assure maximum output of service since the capital impairment resulting from the failure of revenues to equal total costs would threaten the quality of service and would severely limit the period during which any service would be available. If, however, rates were fixed on the basis of marginal cost or demand price, whichever was higher, it is contended that each company would be assured of the minimum price demanded by each seller in a competitive market to increase the volume of his production and would be guaranteed the maximum price at which buyers would be willing to purchase capacity output.

Under this plan any excess of total revenues over total costs would go to the private owners as "plant rental," but in computing marginal cost there would be no allowance for more than "wear-and-tear" depreciation or for investor return. Obviously, if plant capacity was scarce in relation to consumer demand, "plant rental" would be high since rates would be determined solely by demand and the price would ration available service. Management, however, would have little incentive to expand facilities even if the costs of extensions, when made, were included in computation of marginal costs since the inevitable result would be to reduce "plant rentals." It is contended that this difficulty could be overcome by forceful regulation if commissions would give management the choice of expanding or suffering a decrease in investor returns either by rate reductions based upon orthodox earnings standards or by increase in taxation. A

preference is expressed for the latter because there would then be no disturbance of the balance between demand and output achieved by the price having been fixed on the basis of the demand existing for the available supply.

On the other hand, if plant capacity were abundant in relation to demand, "plant rental" would be low or perhaps even non-existent, marginal cost would be determinative of rates, and consumers would be likely to buy more service at the lower rates. Investors, however, would receive little, if any, return until excessive plant capacity had been reduced by a non-replacement policy. To temper the effects of such a period of readjustment it is suggested that subsidies might be paid, or that companies might be allowed to keep excess rentals received in prosperous times to cover deficiencies during depressed periods.

Some of the difficulties in the way of the adoption of this proposal are recognized in the discussion. Substitution of the maximum utilization of services for protection of private property as the goal of rate regulation would not satisfy the constitutional prohibition against confiscation and legislative approval of subsidies is hardly likely. It is doubtful whether even the economists are prepared to furnish a satisfactory measure of "marginal cost." Certainly determination of that factor on either a short or long term basis would require cost breakdowns probably not possible under current accounting procedures. Similarly, data necessary to compute the "demand price" is rarely, if ever, available. Moreover, forecasts as to future demand for utility services would be subject to all of the infirmities of other economic predictions. The complexity of control of rates by this method inevitably would repel administrators. Now beset by the intricacies of valuations, commissioners seek simpler, more expedient methods, not more complicated ones, no matter how weighty the economic or social arguments might be to support their adoption.

Other criticisms of the proposal could be made. The so-called "general rule" of "equation of marginal cost and demand price" would be applicable only if capacity output, and no more, could be sold at marginal cost but at no higher price. Concurrence of those conditions would be accidental and certainly rare. In all other cases either marginal cost or demand price alone would determine rates. Thus to speak of a "general rule" is misleading. Rather, the proposal is that controlling weight be given to one or another of two factors depending on a variety of circumstances and the merit of the proposal can be determined only by considering its validity in each of several different classes of cases. For example, where marginal cost is determinative of ates, it should be observed that so long as unit costs decrease with additional output, rates fixed on the basis of marginal cost will return less than total costs, thus threatening capital impairment and violation of statutory and constitutional limitations. This is particularly true if the unit basis for determination of marginal cost is small in relation to total output. The same problem would be presented if demand prices were higher than marginal costs and were used as the basis for rates if total revenues were less than total costs. If, on the other hand, demand prices resulted in excessive "plant rentals," the rates fixed would have permitted exploitation of the monopoly position of the seller.

Rate reductions under this system would be severely restricted but no definite limitation on earnings is suggested other than the one now generally imposed, namely that of "reasonableness." Admittedly the plan could not work without some such

limitation, and if recourse must be had in any event to application of the imperfect standards now in use, it seems difficult to justify imposition of additional problems on already overburdened regulatory bodies.

Practical and theoretical difficulties aside, however, the unhappy regulatory experiences of the past dictate careful study of every proposal of alternatives for the valuation method of public utility rate-fixing. Management, commission, judicial, academic, and public dissatisfaction with the uncertainties, expense and delay of application of the rule of *Smyth v. Ames*,[3] have been forcefully and frequently expressed. It would appear now to be imperative that some satisfactory substitute be devised and Troxel's analysis and proposal should stimulate consideration of the problem.

Frequently suggested, of course, as a solution for all regulatory difficulties is public ownership. No partisan, Troxel has described and analyzed a variety of experiences in public management of facilities ranging from small local water plants to the gigantic power businesses of the Tennessee Valley Authority, Bonneville Administration, and the other federal power projects. His conclusion that some public plants achieve more social efficiency than private firms while the reverse is also true seems inescapable. Under these circumstances the desirability of the substitution of public ownership for public regulation of privately owned facilities would appear to depend on local conditions with no broad general conclusion either possible or helpful.

In any event it is immediately apparent that rate-fixing for public enterprises also has its difficulties. This is particularly true of the federal electric plants since all of these developments either actually or allegedly serve not only to produce power but also for purposes of flood control and as aids to navigation. Under these circumstances cost allocations, difficult at best, involve a host of political, economic, social, and public relations considerations. Any solution adopted is certain to renew old arguments over the desirability of public activity in the particular field. Thus rates inevitably become a political issue.

In this field fixing of rates by equation of marginal costs and demand prices is even more strongly urged, but the "general rule" is given a different thrust here. It is commonly said that public management is not concerned with showing an operating profit and the widest practicable use of available facilities at the lowest possible rates should undoubtedly be the social goal. It can be achieved if rates are fixed at the level at which buyers will take the maximum output, but this disregards the costs of production. It is proposed, therefore, that rates be fixed on the basis of marginal cost. But in no event should the rates be lower than the prices which consumers are willing to pay for maximum output.

Though peculiarly adaptable to public plants with unused capacity, this scheme is fraught with theoretical and administrative difficulties. In a decreasing cost situation substantial shifts of income and resources from one region to another would result as the differences between total costs and revenues of a federal project were met by taxation. Determination of marginal costs and price variations for different services would be equally as difficult for public managers as for public regulators. Moreover, the adoption of a complicated new rate formula would be equally unattractive to both. Nevertheless, the proposal has the merit of putting the emphasis upon the quantity of service to be derived from publicly owned plants. Even though he recognizes that there is no present prospect of political acceptance of the plan, Troxel's discussion is

[3] 169 U.S. 466, 546 (1898).

bound to assist in clarification of the political and social issues involved not only in fixing rates for existing public facilities but also in selecting new areas for such public activity.

When the work is considered altogether it is readily apparent that Troxel has brought to bear on the problems in this field a distinct set of social and political values. Throughout he endeavors to reconcile concepts of private property and private management's desire for profits with the public interest in expanded service and lower rates. Both theoretical and practical difficulties in the way of adoption of solutions proposed are frankly discussed, though in some instances there is a tendency to minimize the substantial administrative difficulties involved in dealing with these problems.

Particularly from the lawyer's viewpoint, greater use of the "case method" in dealing with some of the questions discussed would have contributed materially to the understanding of the abstract propositions. Taken altogether, however, this work is to be commended not only as a text but also as a description, analysis and evaluation of public regulation and participation in economic activity. Members of regulatory bodies and their staffs should be required to study it, and persons generally interested in public affairs will find it a worthwhile addition to their reading lists.

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Covering the Courts. By Curtis D. MacDougall. New York: Prentice-Hall, Inc., 1946. Pp. xvi, 713. $7.00.

The importance of intelligent journalism in the judicial process, both to the attorney and to the reporter, cannot be emphasized too strongly. The administration of justice so obviously requires the services of the press that the First Amendment of the Constitution may be interpreted as an effort to insure the full and complete accounting of legal matters to the general public. Although recent decisions indicate that the question of the extent of permissible newspaper reporting and commentary on the outcome of trials is still a matter of some dispute, it is scarcely necessary to state that one of the primary functions of a newspaper in a democracy is to present an interpretation of the panorama of day-to-day law which will permit the average citizen to form some opinion as to the condition of our judicial system.

To aid newspaper men and journalism students in their preparation for the difficult job of legal reporting, Curtis MacDougall, professor of journalism at Northwestern University, has compiled a unique and remarkably exhaustive handbook. Dividing his volume into four primary sections on Origins and Survivals, Civil Law, Criminal Law, and Appellate Law, the author manages to encompass practically the entire American legal system, and to include, together with brief technical discussions, full-fledged considerations of the theories of law and a short but penetrating appraisal of the Supreme Court. The "Origins and Survivals" portion of the book is arranged in logical order; the section on the American court system, for example, is followed by a complete classification of the courts and the officers of a court. The reviewer found the chapter on "Trends" rewarding reading, offering stimulating material for a philosophical interpretation of the function of law in society. While the discussions are of

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